

REMARKS

ENTRY OF RESPONSE UNDER 37 C.F.R. §1.116

Applicants request entry of this Rule 116 Response and Request for Reconsideration because:

(a) it is believed that the amendments of claims 1, 7 and 16 put this application into condition for allowance;

(b) the amendments were not earlier presented because the Applicants believed in good faith that the cited references did not disclose the present invention as previously claimed; and

(c) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for appeal.

The Manual of Patent Examining Procedures sets forth in §714.12 that "[a]ny amendment that would place the case either in condition for allowance or in better form for appeal may be entered." (Underlining added for emphasis) Moreover, §714.13 sets forth that "[t]he Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

The Ishikawa et al. reference discusses a method/apparatus for optical time division multiplexing (OTDM) that comprises an optical switch to generate first and second optical clocks according to a carrier beam output from a light source, optical modulators for respectively switching on/off the optical clocks by data signals to thereby generate first and second signal beams, an optical multiplexer for combining the signal beams to generate an OTDM signal, and a prechirp circuit for controlling, for example, the optical clocks so that the OTDM signal has a chirp parameter adapted to an optical transmission line. The Utsumi reference discusses a method, device and system for controlling the wavelength of an optical signal, wherein, for example, the system includes an E/O converter for converting an input electrical signal into an optical signal, an optical band-pass filter to which the optical signal is supplied, and O/E converter for converting the optical signal passed through the filter into an output electrical signal, and a control unit for controlling a parameter (e.g., temperature of a laser diode) on which the wavelength of the optical signal depends so that the bit error detected decreases. Further, the Utsumi reference discusses that the wavelength of the optical

signal is maintained constant, so that degradation in transmission quality due to wavelength changes is prevented. The Aoki reference discusses an optical transmitter that includes a semiconductor laser which is supplied with a frequency modulated current so that an emitted light from the semiconductor laser is modulated in intensity by an intensity modulator in accordance with an information signal and becomes a signal light pulse.

Combining the Ishikawa et al. reference and the Utsumi reference would lead to an optical modulating method/device that maintains a constant wavelength. Combining the Ishikawa et al. reference, the Utsumi reference, and the Aoki reference would lead to an optical modulating method/device that maintains a constant wavelength and uses a photodetector. In contrast, the present application recites "outputting an optical signal having a chirping determined by a chirp parameter to an optical fiber transmission line, including generating said optical signal by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data code; converting the optical signal transmitted by said optical fiber transmission line into an electrical signal; detecting a first error count when the chirp parameter is set to a positive value; detecting a second error count when the chirp parameter is set to a negative value; comparing the first error count with the second error count to provide a difference; and controlling said chirp parameter in accordance with the difference so that bit error detected is reduced, suppressing chromatic dispersion and nonlinearity."

REJECTION UNDER 35 U.S.C. §103

In the Office Action, at pages 2-4, numbered paragraph 2, claims 1-5 and 16 were rejected under 35 U.S.C. §103 as being unpatentable over Ishikawa (USPN 5,926,297; hereafter, Ishikawa '297) in view of Utsumi (USPN 6,031,644; hereafter, Utsumi). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

It is respectfully submitted that, as the Examiner admits, Ishikawa '297 does not specifically disclose detecting a first error count when the chirp parameter is set to a positive value and detecting a second error count when the chirp parameter is set to a negative value. Hence, Ishikawa '297 does not discuss or suggest detecting a first error count when the chirp parameter is set to a positive value and detecting a second error count when the chirp parameter is set to a negative value as in the present invention.

Utsumi discusses that the oscillation wavelength of the laser diode (the wavelength of an optical signal to be output) is dependent on parameters such as a bias current and a temperature (see col. 4, lines 58-61). Utsumi discusses controlling a wavelength of an optical signal so that the wavelength of the optical signal is *maintained substantially constant*, i.e., Utsumi does not discuss that the wavelength is a function of the chirp parameter, but rather teaches that the wavelength is stabilized by, for example, in the preferred embodiment, controlling the *temperature of the* optical band-pass *filter* (see col. 3, lines 60-67) so that detected bit error decreases. That is, the filter, not the chirp parameter, serves as a wavelength reference in Utsumi. Thus, it is respectfully submitted that there is no teaching or suggestion by Utsumi of using the chirp parameter as a function of wavelength as in the present invention.

Thus, even if Utsumi were combined with Ishikawa, it is respectfully submitted that the combination would not result in the present invention, wherein an optical signal is generated by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data code and the chirp parameter is controlled so that the bit error detected is reduced (see independent claims 1, 7 and 16 of the present application), suppressing chromatic dispersion and nonlinearity.

For clarity, the recitation "suppressing chromatic dispersion and nonlinearity" has been added to independent claims 1, 7 and 16. Hence, the independent claims of the present invention recite adjustment of the chirp parameter as a function of the wavelength, while Utsumi teaches away from the present invention by teaching maintaining a substantially constant wavelength.

It is respectfully submitted that the courts have held that the Examiner may not suggest modifying references using the present invention as a template absent a suggestion of the desirability of the modification in the prior art. *In re Fitch*, 23 U.S.P.Q.2d 1780, Fed Cir. 1992. Something in the prior art as a whole must suggest the desirability, and thus, the obviousness, of making the combination. *Alco Standard Corp. v. Tennessee Valley Authority*, 808 F. 2d 1490, 1 U.S.P.Q. 2d 1337 (Fed. Cir. 1986). When a rejection depends on a combination of prior art references, there must be some teaching, suggestion or motivation to combine the references. *In re Geiger*, 815 F.2d 686, 688 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987). Thus, since there is no teaching or suggestion of combining Ishikawa '297 with Utsumi, and even if combined, Ishikawa '297 and Utsumi would not teach the present invention, it is respectfully submitted that claims 1, 7 and 16 are patentable over Ishikawa '297 in view of Utsumi under 35 U.S.C. §103(a).

Since claims 2-5 and 8-15 depend from independent claims 1 and 7, respectively, claims 2-5 and 8-15 are submitted to be allowable under 35 U.S.C. §103(a) over Ishikawa '297 in view of Utsumi for at least the reasons that independent claims 1, 7 and 16 are submitted to be allowable over Ishikawa '297 in view of Utsumi under 35 U.S.C. §103(a).

In the Office Action, at pages 4-6, numbered paragraph 3, claims 7-15 were rejected under 35 U.S.C. §103 as being unpatentable over Ishikawa (USPN 5,926,297; hereafter, Ishikawa '297) in view of Utsumi (USPN 6,031,644; hereafter Utsumi) and further in view of Aoki (USPN 5,315,426; hereafter, Aoki). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

This rejection is based on having to combine three (3) references. It is respectfully submitted that, as noted above, the courts have held that the Examiner may not suggest modifying references using the present invention as a template absent a suggestion of the desirability of the modification in the prior art. *In re Fitch*, 23 U.S.P.Q.2d 1780, Fed Cir. 1992. Something in the prior art as a whole must suggest the desirability, and thus, the obviousness, of making the combination.

As noted above, combining Ishikawa '297 and Utsumi is not taught or suggested, and even if combined, it is respectfully submitted that the combination would not lead to the present invention.

Thus, it is respectfully submitted that amended independent claims 7 and 16 are nonobvious under 35 U.S.C. §103 and are patentable over Ishikawa (USPN 5,926,297) in view of Utsumi (USPN 6,031,644) and further in view of Aoki (USPN 5,315,426).

Since claims 8-15 depend from amended independent claim 7, claims 8-15 are submitted to be nonobvious under 35 U.S.C. §103 and patentable over Ishikawa (USPN 5,926,297) in view of Utsumi (USPN 6,031,644) and further in view of Aoki (USPN 5,315,426) for at least the reasons that amended independent claim 7 is submitted to be nonobvious under 35 U.S.C. §103 over same.

CONCLUSION

In accordance with the foregoing, claims 1, 7 and 16 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-5 and 7-16 are pending and under consideration. Reconsideration is respectfully requested.

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably

distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,
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